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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,116	12/02/2003	Victor Gorelik		2789

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Dr. Victor Gorelik
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254 73 Street
Brooklyn, NY 11209

EXAMINER

LOUIE, OSCAR A

ART UNIT	PAPER NUMBER
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2136

MAIL DATE	DELIVERY MODE
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10/22/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/725,116

Applicant(s)

GORELIK, VICTOR

Examiner

Oscar A. Louie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This second non-final action is in response to the appeal brief filing of 07/11/2007. In light of the applicant's appeal brief arguments regarding their claim limitations of "shuffling arrays of real biometric characteristics," the examiner has found it persuasive to withdraw his first Final-Rejection and re-open prosecution back to the point of after the first Non-Final and the first reception of the applicant's first amendment dated 04/09/2007. The examiner withdraws his previous Claim Objections and notation of 35 U.S.C. 112 6th paragraph regarding Claims 5 & 6 in light of the applicant's amendments dated 04/09/2007. Claims 1-5 are pending and have been considered as follows.

Examiner's Note

The examiner notes that the page 2 of the applicant's appeal brief must have the proper applicable information under headings "(v) Summary of claims subject matter" and "(vi) Grounds of rejection to be reviewed on appeal" regardless of whether they are represented by a registered practitioner. Under the heading, "(v) Summary of claims subject matter," the applicant would place a short synopsis of their invention similar to their specification summary. Under the heading, "(vi) Grounds of rejection to be reviewed on appeal," the applicant would place the Claim rejections made that the applicant is appealing. In addition, the examiner also notes that it is unnecessary to split the Claim arguments according to their independent/dependent status if the Claims are rejected under the same reference(s) and rejection

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type. In the case of the applicant, "Rejection under 35 U.S.C. 102(b) over U.S. Patent No. US-6185316-B1" this heading does not need to be repeated for independent Claim 5. Instead, it would suffice for the applicant to include the heading above then recite "Claims 1 to 5:" for the purposes of clarity.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buffam (US-6185316-B1) in view of Scheidt et al. (US-6542608-B2).

Claim 1:

Buffam discloses a method for securely submitting biometric data from a client to a server comprising,

- "performing sampling of a real biometric characteristic at the client" [Fig 8 illustrates sampling of biometric characteristics];

but Buffam does not disclose,

- "shuffling arrays of real biometric characteristics in the sequence known at client only to thereby generate twisted biometric data"
- "submitting the twisted biometric data from the client to the server"

however, Scheidt et al. do disclose,

- “This information, in digital form, will then be used to generate the biometric split 38.
This may be accomplished by, for example, randomizing a digital string corresponding to the biometric vectors 58 with biometric combiner data 60, which may be a digital hash of the user's system identification number or some other identifying data that can be linked to the user's physical data provided by the biometric reader” [column 5 lines 34-41];
- “Referring to FIG. 1, a communication has an origination space 2 and a destination space 4” [column 3 lines 46-47];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, “shuffling arrays of real biometric characteristics in the sequence known at client only to thereby generate twisted biometric data” and “submitting the twisted biometric data from the client to the server,” in the invention as disclosed by Buffam since it is implied that a submission of “twisted biometric data” would occur between two points an origination space and a destination space, where the randomizing (i.e. shuffling) of a digital string corresponding to biometric vectors (i.e. arrays of real biometric characteristics) with biometric combiner data may be random/pseudorandom and not necessarily hashing.

Claim 2:

Buffam and Scheidt et al. discloses a method for securely submitting biometric data from a client to a server, as in Claim 1 above, but their combination do not disclose,

- “the shuffling sequence is calculated at client on the base of the value of a secret object created at the client and known to client only”

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however, Scheidt et al. do disclose,

- “This may be accomplished by, for example, randomizing a digital string corresponding to the biometric vectors 58 with biometric combiner data 60, which may be a digital hash of the user's system identification number or some other identifying data that can be linked to the user's physical data provided by the biometric reader” [column 5 lines 36-41];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, “the shuffling sequence is calculated at client on the base of the value of a secret object created at the client and known to client only,” in the invention as disclosed by Buffam for the purposes of increased difficulty in determining the randomizing sequence/method used (i.e. “provides information that is incapable of being reproduced by anyone but the user providing the biometric data vector”) [column 5 lines 42-44].

Claim 3:

Buffam and Scheidt et al. discloses a method for securely submitting biometric data from a client to a server, as in Claim 2 above, further comprising,

- “the step of multiplying the arrays of biometric characteristics by the sequences of numbers fixed for each type of array and known at the client only” (i.e. “Typically, an original image is represented by many discrete information points, similar to grid points on a map. True image points can be extracted from the information points on the basis of pragmatic considerations, such as data reduction. The set of true image points can be stored as a master template uniquely representative of the original image. False image

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points are generated and are selectively interposed among a chosen subset of the true image points, forming a transient template. The false image points also may be transformed to produce an encoding key”) [column 12 lines 4-27].

Claim 4:

Buffam and Scheidt et al. discloses a method for securely submitting biometric data from a client to a server, as in Claim 3 above, further comprising,

- “the step of submitting of twisted biometric data is followed by the step of comparing this data against the samples of twisted biometric data saved at the server previously, in such a way, that the result of the verification and/or identification depends neither on the specific sequence in which biometric arrays were shuffled on the client, nor on the specific sequence of numbers used on the client to change the values of the arrays” (i.e. “Once the user is enrolled, the biometric is used to verify the user's identity, step 805. When claimant 870 needs to be authenticated, a sample 872 of the user's biological feature is sensed, digitized, and processed. The digitized sample is compared to the stored biometric template, step 875, here stored in credential 860”) [column 18 lines 67 & column 19 lines 1-2].

Claim 5:

Buffam discloses a method for securely submitting biometric data from a client to a server comprising,

- “said system programmed for performing verification and/or identification of the client” (i.e. “Once the user is enrolled, the biometric is used to verify the user's identity, step 805. When claimant 870 needs to be authenticated, a sample 872 of the user's biological

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feature is sensed, digitized, and processed. The digitized sample is compared to the stored biometric template, step 875, here stored in credential 860”) [column 18 lines 67 & column 19 lines 1-2];

but Buffam does not disclose,

- “means for performing twisted sampling by changing the sequence of terms in biometric array and submitting data to the server”

however, Scheidt et al. do disclose,

- “This information, in digital form, will then be used to generate the biometric split 38.

This may be accomplished by, for example, randomizing a digital string corresponding to the biometric vectors 58 with biometric combiner data 60, which may be a digital hash of the user's system identification number or some other identifying data that can be linked to the user's physical data provided by the biometric reader” [column 5 lines 34-41];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, “means for performing twisted sampling by changing the sequence of terms in biometric array and submitting data to the server,” in the invention as disclosed by Buffam since it is implied that a submission of “twisted biometric data” would occur between two points an origination space and a destination space, where the randomizing (i.e. shuffling/twisting) of a digital string corresponding to biometric vectors (i.e. arrays of real biometric characteristics) with biometric combiner data may be random/pseudorandom and not necessarily hashing.

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Conclusion

3. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Oscar Louie whose telephone number is 571-270-1684. The examiner can normally be reached Monday through Thursday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Moazzami, can be reached at 571-272-4195. The fax phone number for Formal or Official faxes to Technology Center 2100 is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OAL
10/17/2007

Nasser Moazzami
Supervisory Patent Examiner


10,18,07